UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,381	06/24/2003	Kenichi Hashizume	863.0038.U1(US)	4723

29683 7590 11/09/2007

HARRINGTON & SMITH, PC
4 RESEARCH DRIVE
SHELTON, CT 06484-6212

EXAMINER	
TALBOT, BRIAN K	

ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
11/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/606,381	HASHIZUME ET AL.	
	Examiner	Art Unit	
	Brian K. Talbot	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1,2,4,6-16,18,19,42 and 43 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,4,6-16,18,19,42 and 43 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The amendment filed 9/7/07 has been considered and entered. Claims 3,5,17,20-41 and 44-50 have been canceled. Claims 1,2,4,6-16,18,19,42 and 43 remain in the application.

2. In light of the amendment the 35 USC 112 rejection over claim 4 has been withdrawn.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1,2,4,6-16,18,19 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2003-008180 in combination with Tarponol et al. (3,772,075) further in combination with either Sturm et al. (3,791,872) or JP 09-059,778 further in combination with Wennemer et al. (7,010,121).

JP 2003-008180 teaches a three-dimensional circuit component for a mobile telephone having a circuit patterned formed on bonding film that is formed on a three-diemensional molding. JP 2003-008180 teaches a bonding film (3) containing a catalyst is formed on a three-dimensional molding (1). A circuit pattern (4) is formed on the bonding film by electroless plating.

JP 2003-008180 fails to teach applying the bonding/catalyst film prior to molding as opposed to after molding.

Tarponol et al. (3,772,075) discloses a method of forming a pattern on an article comprising the steps of applying a carrier material to a substrate to provide the pattern, the carrier material carrying a seeding substance to allow application of a metallic material thereto, molding the substrate to form the article and applying the metallic material to the seeding substance on the carrier material (column 3 lines 9-40, example 2).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified JP 2003-008180 process by alternating the molding and bonding/catalyst steps with the expectation of achieving similar success for producing a molded article having catalyst thereon for subsequent plating.

Referring to claim 2, Tarponol et al. (3,772,075) teaches the carrier material comprising an ink and it is applied to the substrate by screen printing (column 10 lines 21-28).

Referring to claim 4, Tarponol et al. (3,772,075) teaches the substrate sags upon heating, this acts to stretch the substrate, the binder material is a resinous oil it would inherently be capable of stretching to the same extent as the substrate as it is a liquid and can form the shape of its container (column 10 lines 5-20).

Referring to claim 6, Tarponol et al. (3,772,075) teaches the seeding substance comprises a plurality of metal particles in the carrier material (column 10 lines 5-20).

Referring to claim 9, Tarponol et al. (3,772,075) teaches the particles are present in a range of 10 % by weight or less (column 10 lines 5-20).

Referring to claim 10 and 11, Tarponol et al. (3,772,075) exemplifies particle weight percents in the range of 0.1 and 0.5 wt % (table 4).

Referring to claims 12-14, Tarponol et al. (3,772,075) discloses all of the features of these claims except it does not disclose the size of the particles it only discloses using a commercially available noble metal luster. However, the size of the particles determines the surface area of the particles per unit volume and smaller particles have more surface area per unit volume accordingly it would be desirable to use particles with high surface area per unit volume as there would be more active sites for seeding than with larger particles. Accordingly, the size of the particles it effects the amount of seeding material necessary. Therefore the size of the particles is a result effective parameter in that it effects the volume of seeding material necessary to form the coating. It would have been obvious to have adjusted the size of the particles to values in the claimed ranges through routine experimentation so as to minimize the volume of seeding material necessary, especially in the absence of a showing of a criticality for using values in the claimed ranges.

JP 2003-008180 in combination with Tarponol et al. (3,772,075) fail to teach the claimed binder for fixing the seeding substance to the substrate.

Sturm et al. (3,791,872) teaches a method of producing an electrode for electrochemical cells. The catalyst particles are supplied to the substrate with a binder of acrylonitrile-butadiene-styrene (abstract).

JP 09-059,778 teaches a pretreatment for electroless plating. A metallic catalyst is dispersed in a binder and applied to a substrate and then electroless plating is applied to the catalyzed substrate. The binder is disclosed as an acrylic or polyurethane (abstract).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified JP 2003-008180 in combination with Tarponol et al. (3,772,075) binder with the binders of either Sturm et al. (3,791,872) or JP 09-059,778 with the expectation of achieving similar success.

JP 2003-008180 in combination with Tarponol et al. (3,772,075) further in combination with either Sturm et al. (3,791,872) or JP 09-059,778 fails to teach the substrate being comprised of a thermoplastic material.

Wennemer et al. (7,010,121) teaches a mobile telephone whereby a thermoplastic material is molded to form telephone housing (abstract, col. 2, lines 36-45 and col. 3, lines 5-21).

Response to Amendment

6. Applicant's arguments with respect to claims 1,2,4,6-16,18,19,42 and 43 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argued that the rejection failed to teach a thermoplastic substrate.

Wennemer et al. (7,010,121) teaches a mobile telephone whereby a thermoplastic material is molded to form telephone housing as detailed above.

Applicant argued the references individually and it has been well settled that pointing out the differences between the reference and each individual reference is not sufficient to over come a rejection based on a combination of the references. One cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 208 USPQ 871 (CCPA 1981); *In re Merck & Co., Inc.*, 231 USPQ 375 (Fed. Cir. 1986). Furthermore, the test of obviousness is not express suggestion of the claimed invention in any or all references but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them. *In re Rosselet*, 347 F.2d 847, 146 USPQ 183 (CCPA 1965); *In re Hedges,* 783 F.2d 1038.

Applicant argued that there is no need for a binder material in JP 2003-008180 that the binder in Tarponol et al. (3,772,075) is evaporated and that the Sturm et al. (3,791,872) or JP 09-059,778 fail to teach the claimed binders. The combination of references would teach using the binders of Sturm et al. (3,791,872) or JP 09-059,778 to applying the seed/catalyst layer of Tarponol et al. (3,772,075) in place of the bonding film of JP 2003-008180 with the expectation of achieving the desired metallic pattern.

Applicant argued that claim 18 appears to be clearly beyond any disclosure of the references.

The Examiner disagrees. The claim recites molding prior to applying the catalyst layer. JP 2003-008180 clearly teaches this feature as the mobile phone is molded and the bonding film with the seeding material is thereafter applied. Even absent this showing, it is the Examiner's position that this would be the preferred method of operation as it would avoid damaging the seed/catalyst layer during the subsequent molding process.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 8AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B K Talbot 11/7/06

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT